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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/556,933

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Jacek Maslanka

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EXAMINER

BERNS, DANIEL J

ART UNIT

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1793

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03/10/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/556,933	<b>Applicant(s)</b> MASLANKA ET AL.	
	<b>Examiner</b> DANIEL BERNS	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. In considering the obviousness rejections below, the applicant should note that the person having ordinary skill in the art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in the application reasonably reflect this level of skill.
4. Claims 1-2 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polish Pat. No. PL 345,913 (appears in applicant's IDS) ("PL '913") in view of Scheetz, B. E. & Earle, R. "Utilization of fly ash," Current Opinion in Solid State & Materials Science (1998) 3:510-520 ("Scheetz"). Regarding claims 1 and 6-7, PL '913 discloses a method for producing highly reactive Ca-based sorbents obtained from CaCO<sub>3</sub> and/or fly ash, wherein CaCO<sub>3</sub> grains are at least 92 wt. % pure CaCO<sub>3</sub> and below 150 µm in diameter (and preferably 30 µm), said grains being mixed with fly ash from the combustion of coal fuels (esp. in fluidized-bed and/or

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powdered fuel furnaces, where dry desulfurization is employed) – the fly ash containing 4-40 wt. % CaO, 25-45 wt. % silica, and 3-37 wt. % alumina, where the overall CaCO<sub>3</sub>-fly ash mixture is 20-60 wt. % CaCO<sub>3</sub> (preferably 40 wt. % CaCO<sub>3</sub>) – the particulate mixture being mechanically de-agglomerated and activated through free particle collisions at speeds of at least 8 m/s. *See id.* at p. 2, full par. 4; clm. 2. One specific mixture example employed was as follows: fly ash containing 39 wt. % silica, 21 wt. % alumina, 15 wt. % CaO, and remainder other compounds was mixed with CaCO<sub>3</sub> (95.6 wt. % pure CaCO<sub>3</sub>, <150 µm particle diameter particles) to give an overall mixture of 40 wt. % CaCO<sub>3</sub>. *See id.* at p. 6, Ex. 2. However, PL '913 fails to disclose the presence of 5-15 wt. % SO<sub>3</sub> within its fly ash mixture component. This limitation, though, is taught by Scheetz. Scheetz teaches SO<sub>3</sub> wt. % values in various fly ashes of 1.1, 5.0, 13.0 and 20.8. *See* Scheetz at pp. 512-513 (Tables 3 and 5). Such SO<sub>3</sub> wt. % values render the claimed SO<sub>3</sub> range unpatentable - *see, e.g., In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) (holding that a *prima facie* case of obviousness exists where claimed ranges “overlap or lie inside ranges disclosed by the prior art”), *see also* MPEP § 2144.05 - it would thus have been obvious to one of ordinary skill in the art at the time of the invention given Scheetz's teachings that fly ash such as PL '913's would contain an SO<sub>3</sub> content of 5-15 wt. %.

Regarding claims 2 and 8, PL '913 discloses a method of obtaining highly reactive calcium sorbents obtained from CaCO<sub>3</sub> and/or fly ash (such fly ash obtained from coal fuel combustion, esp. in fluidized-bed and powdered-fuel furnaces, where dry desulfurization is employed) - the fly ash containing 4-40 wt. % CaO, 25-45 wt. % silica, and 3-37 wt. % alumina - said precursor materials being mechanically de-agglomerated and activated through free particle collisions at speeds of at least 8 m/s. *See id.* at p. 2, full par. 5; clm. 3. A specific composition is

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disclosed at p. 6, Ex. 2 as previously described. Again, while PL '913 fails to disclose the presence of 5-15 wt. %  $\text{SO}_3$  within its fly ash mixture component, said limitation is taught by Scheetz. *See* Scheetz at pp. 512-513 (Tables 3 and 5). Given Scheetz's above-detailed teaching of various fly ash  $\text{SO}_3$  wt. % contents, it would have been obvious to one of ordinary skill in the art at the time of the invention that fly ash such as PL '913's would contain 5-15 wt. %  $\text{SO}_3$ . *In re Wertheim*; MPEP 2144.05.

### ***Response to Amendment***

5. Applicant's 1/26/09 amendments to claims 1-2 and the specification are sufficient to overcome Examiner's objections (to said claims and specification) and rejections under 35 U.S.C. 112 (to said claims) thereto. Said objections and rejections are withdrawn.

### ***Response to Arguments***

6. Applicant's arguments filed 1/26/09 have been fully considered but they are not persuasive. Regarding claim 1, PL '913 does indeed teach the preliminary mixing of  $\text{CaCO}_3$  and fly ash, and the subsequent mechanical de-agglomeration and activation thereof (*see id.* at p. 2, bottom of 4<sup>th</sup> full par.: "...and such mixture of calcium carbonate and fly-ashes is being mechanically de-agglomerated and activated through free particles collisions..."). Further, the Scheetz reference is merely included to illustrate that fly ash (such as that within PL '913) contains  $\text{SO}_3$  within the claimed wt. % range- in other words, Scheetz is only meant to provide data omitted by PL '913. Thus, a *combination* of these two references is not intended, and an analysis of the combinability thereof is unnecessary.

Regarding claim 2, it is noted that applicant's 1/26/09 arguments do not address the relevance of PL '913 to independent claim 2, but only to independent claim 1. The only

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argument regarding claim 2 found therein is the non-combinability of Scheetz with PL '913, discussed above. The absence of any arguments regarding the applicability of PL '913 to claim 2 is understood to be an acquiescence thereof, noting that the claim amendments are mostly or entirely cosmetic.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL BERNS whose telephone number is (571)270-5839. The examiner can normally be reached on Monday thru Thursday, 9AM-6PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached at (571)272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. B./ March 9, 2009  
Examiner, Art Unit 1793

/Stuart Hendrickson/  
Primary Examiner, Art Unit 1793